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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Joseph S. Stam

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EXAMINER

ALLISON, ANDRAE S

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

02/23/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail@priceheneveld.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/777,468	STAM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ANDRAE S. ALLISON	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 12/04/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 17, 18 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 17, 18, 23 and 24-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Remarks***

1. The Office Action is in response to amendment filed November 04, 2010. Claims 1-6, 17, 18, 23 and 24-28 are pending. Applicant's arguments have been carefully and respectfully considered in light of the instant amendment, and are not persuasive. Accordingly, this action has been made FINAL.

#### Claim Objections

Applicant has amended claim 17 to correct the typographical error. Therefore, the objection has been removed.

#### Claim Rejections – 35 USC section § 112

Applicant has amended the claims to refer to automatic operation of an exterior light, making the claims definite; therefore, the rejection has been removed.

#### Claim Rejections – Double Patenting

Applicant has filed a terminal disclaimer; therefore, the rejection has been removed.

#### Claim Rejections – 35 USC section § 103

On pages 10-11 of the response, Applicant argues that the combination of Kobayashi and Kiyotaka as a whole is not proper combinable because “such

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combination is based on upon impermissible high-sight contrary to MPEP § 2145(X)(A)"; however, the Examiner disagrees. Kobayashi discloses all the limitation of claim 1 except the limitation "wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo transducer". One of ordinary skilled in the art would have look to Kiyotaka because both references are directed to solving the same problem of changing illumination state base on light received on photo-detectors. Also, Kiyotaka clearly discloses a dimming controller for vehicle (see title) wherein said ambient light value is a weighted average of a plurality of ambient light level readings acquired from a photo transducer (see abstract).

Furthermore, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant also argues that Kiyotaka would render Kobayashi inoperable because the headlights of Kobayashi would be dimmed during the day and brightened during daytime conditions. However, the Examiner disagrees with Applicant because the Examiner introduced Kiyotaka for the teaching of "wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo

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transducer”, not for the dimming or changing the illumination state of the headlights.

Furthermore, in response to Applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the dimming of an instrument panel, which is generally known to dim during nighttime conditions when there are dark ambient light conditions and be brightened during daytime or bright ambient) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's arguments with respect to claims 5, 17 and 18 have been considered but are moot in view of the new ground(s) of rejection. Also, on page 18 of the response, Applicant argues that the Examiner withdraws the rejection of claims 5, 17 and 18, then reinstates then is groundless as there no mentioning of claims 5, 17 and 18 on page 9 of the previous Office Action.

Applicant's arguments with respect to claims 23-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-4, 6 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent No.: 6,254,259) in view of Kiyotaka (JP 01-281496).

As to independent claim 1, Kobayashi discloses an automatic vehicle exterior light control system (vehicle lamp system, see Fig 1), comprising: a controller (3, illumination control means, see Fig 1) configured to effect automatic operation as a function of an ambient light value, further configured to generate an exterior light control signal as a function of the presents of an atmospheric condition of interest (2, environment detection means, see Fig 1), wherein said controller is further configured to distinguish between reflections off of a highly reflective surface and reflections off of atmospheric conditions of interest (note that the environment detections means can determine the weather and road surface conditions using images; see column 2, lines 55-61), wherein an exterior light control output of said controller is in a first state when reflections off of a highly reflective surface are detected and said exterior light control output is in a second state when reflections off of atmospheric conditions of interest are detected (see column 4, lines 1-6, where the distribution of the luminous intensity changes based the atmospheric condition).

Note the discussion above, Kobayashi does not expressly disclose wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo transducer. Kiyotaka discloses a dimming controller for vehicle (see title) wherein said ambient light value is a weighted average of a plurality of ambient light level readings acquired from a photo transducer (see abstract). At the time of that the

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invention was made, it would have been obvious to a person of ordinary skill in the art to consider the dimming controller for vehicle of Kiyotaka as a modification to the teaching of Kobayashi to properly keep the dimming state of a luminous display part by selecting a detection result, on which illumination circumstances of a vehicle are accurately reflected in a high degree, to control dimming of the luminous display part in the vehicle

As to claim 2, Kobayashi teaches an automatic vehicle exterior light control system wherein said highly reflective surface is selected from the group comprising: an at least partially wet road, an at least partially snow covered road, an at least partially ice covered road, a surface of a snow pile along a road, and a surface of an at least partially snow covered road side (e.g. snowy, see column 3, lines 10-16, note that the reflective surfaces are examples of road surface conditions).

As to claim 3, Kobayashi teaches an automatic vehicle exterior light control system wherein said atmospheric condition of interest is selected from the group comprising: fog, mist, snow, sleet, hail, rain, steam, smoke and dust (e.g. fog, see column 3, lines 1-5, note that the atmospheric condition are examples of weather conditions).

As to claim 4, note the discussion of claim 2 above.

As to claim 6, Kobayashi teaches an automatic vehicle exterior light control

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system wherein said controller is further configured to manipulate an exterior light maximum brightness limit (see column 3, lines 56-60).

As to claim 25, the combination of Kobayashi and Kiyotaka as a whole does not expressly disclose an automatic vehicle exterior light control system, wherein said weighted average is of a most recent approximately 16 photo sensor readings with approximately 100 ms intervals. However, it would have been obvious for one skilled in the art using known methods to apply a weighted average that is of a most recent approximately 16 photo sensor readings with approximately 100 ms intervals with predictable results to ensure light reaches the sensors.

As to claim 26, the combination of Kobayashi and Kiyotaka as a whole does not expressly disclose an automatic vehicle exterior light control system, wherein said weighted average is of a most recent approximately 256 photo sensor readings with approximately 100 ms intervals. However, it would have been obvious for one skilled in the art using known methods to apply a weighted average that is of a most recent approximately 16 photo sensor readings with approximately 100 ms intervals with predictable results to ensure light reaches the sensors.



As to claims 27-28, , the combination of Kobayashi and Kiyotaka as a whole does not expressly disclose, wherein said photo transducer is a high dynamic range imager, such that high dynamic range images are acquired to detect an atmospheric condition and wherein said high dynamic range image is a synthetic high dynamic range image. However, the manner and preferences of using a high dynamic range imager, such that high dynamic range images are acquired to detect an atmospheric condition and wherein said high dynamic range image is a synthetic high dynamic range image as claimed can be carried out using know methods such that the atmospheric conditions outside the vehicle can be easily detected using synthetic high dynamic range images and would have yielded predictable results.

4. Claims 5 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent No.: 6,254,259) in view of Kiyotaka (JP 01-281496) further in view Simpson et al (NPL document titled: "A Recurrent Neural Network Classifier for Improved Retrievals of Areal Extent of Snow Cover").

As to claim 5, Kobayashi teaches an automatic vehicle exterior light control system wherein said reflections are identified by employing slope of pixel column location versus pixel grayscale value of at least a portion of a column of pixels within at least one image (see column 3, lines 50-52, where one of the parameter for the control means is the distribution of luminous intensity), increase brightness of controlled vehicle's exterior light (intensity of light, see column 3, lines 50-52). However Kobayashi does not expressly disclose at least one probability function, and at least one

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neural network. Simpson discloses a recurrent neural network classifier (see title), which includes at least one probability function (see page 2136, [p][005], lines 1-11 where a probability function is used in the selection of texture models), and at least one neural network (NN, see Fig 1). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teachings of Kobayashi and Simpson to accurately determine the atmospheric or weather conditions by using a neural network to classify image data collected from the exterior of the vehicle because Kobayashi does not make this determination and neural networks are a well know way to make this type of determination.

Note the discussion above, the combination of Kobayashi and Simpson does not expressly disclose wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo transducer. Kiyotaka discloses a dimming controller for vehicle (see title) wherein said ambient light value is a weighted average of a plurality of ambient light level readings acquired from a photo transducer (see abstract). At the time of that the invention was made, it would have been obvious to a person of ordinary skill in the art to consider the dimming controller for vehicle of Kiyotaka as a modification to the combination of Kobayashi and Simpson to properly keep the dimming state of a luminous display part by selecting a detection result, on which illumination circumstances of a vehicle are accurately reflected in a high degree, to control dimming of the luminous display part in the vehicle

As to claim 17, all the limitations are discussed above except: "wherein a state of an exterior light control output of said, controller is at least partially dependent upon. the source of said reflection in said image". Simpson teaches wherein a state of an exterior light control output of said, controller is at least partially dependent upon the source of said reflection in said image (see column 4, where the intensity of the light is dependent upon the detection of precipitation of now and density of fog).

As to claim 18, note the discussion of claim 6 above.

5. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jose (US Patent No.: 5,798,911) in view of Sekine et al (US Patent No.: 5,963,148) further in view of Kiyotaka (JP 01-281496)..

As to independent claim 23, Josie disclose an automatic vehicle exterior light control system (automatic light system, see Fig 1), comprising: a controller (60, control means, see Fig 1) configured to effect automatic operation as a function of an ambient light value, wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo transducer (see column 9, lines 4-10 – where the automatic light sensor contains a light sensor which measures the average external light intensity) further configured to detect at least one of a pedestrian and a bicyclist and further configured to provide a corresponding indication to an operator of a controlled vehicle, wherein a state of an exterior light control output of said controller is at least partially dependent upon detection of either a pedestrian or a bicyclist. (see

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column 11, lines 31-49, where an emergency condition such a pedestrian or wild animal is detected and the beam range is automatically reduced). However, Josie did not expressly disclose providing a corresponding indication to an operator of a controlled vehicle. Sekine disclose a road situation perceiving system, in which an indication is provided to an operator of a controlled vehicle if there is an obstacle present in the road (see Fig 2, Step 5). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined the teaching of Josie and Sekine to perceive a road situation ahead of a subject vehicle so that an appropriate countermeasure may be performed, if necessary, without relying on a driver's visual judgment (column 1, lines 37-42), while alerting the driver of an hazardous situation in the form of an alarm (column 2, lines 14-16) and also providing the driver with a view of the hazardous situation on a display (column 2, lines 54-59).

Note the discussion above, the combination of Jose and Sekine as a whole does not expressly disclose wherein said ambient light is a weighted average of a plurality of ambient light level readings acquired from a photo transducer. Kiyotaka discloses a dimming controller for vehicle (see title) wherein said ambient light value is a weighted average of a plurality of ambient light level readings acquired from a photo transducer (see abstract). At the time of that the invention was made, it would have been obvious to a person of ordinary skill in the art to consider the dimming controller for vehicle of Kiyotaka as a modification to the combination of Jose and Sekine to properly keep the dimming state of a luminous display part by selecting a detection result, on which

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illumination circumstances of a vehicle are accurately reflected in a high degree, to control dimming of the luminous display part in the vehicle

As to claim 24, the combination of Josie, Sekine and Kiyotaka as a whole does not expressly disclose an automatic vehicle exterior light control system further configured to disable automatic operation of at least one high beam headlight in response to an operator activated input device. However, it would have been obvious to disable automatic operation of at least one high beam headlight in response to an operator activated input device to turn off the high beam in cases where the automatic vehicle exterior light control system fails to turn off the high beam so that an on coming car, a cyclist or pedestrian is not dazzle by the high beams (OFFICIAL NOTICE).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Inquiries***

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDRAE S. ALLISON whose telephone number is (571)270-1052. The examiner can normally be reached on Monday-Friday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vu Le/  
Supervisory Patent Examiner, Art Unit 2624

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